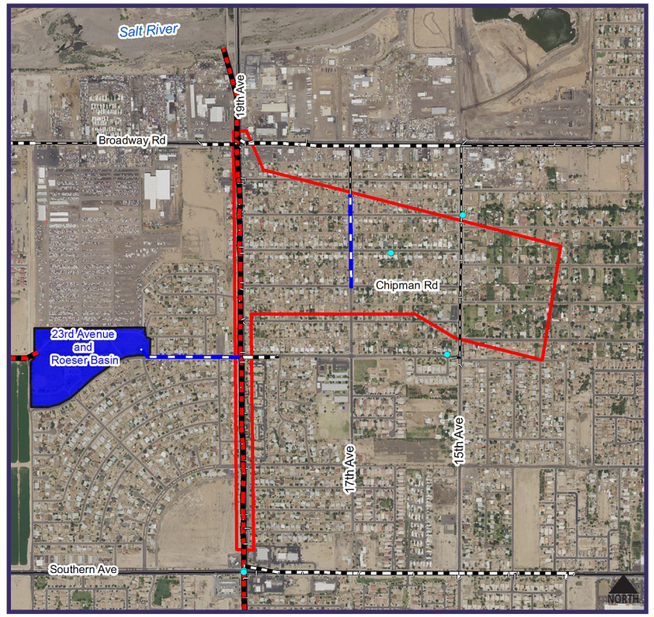
## 6. 19th Avenue and Chipman Road

For the 19th Avenue and Chipman Road area, flooding problems occur from local runoff that collects and ponds and because the storm drain in 19th Avenue is also overtaxed and unable to drain the area effectively.

### SINGLE ALTERNATIVE

- Add inlets on the existing 15th Avenue storm drain
- Extend 17th Avenue storm drain south with more inlets
- Add inlets on 19th Avenue
- Add a connection to the existing stormwater basin in the 23rd Avenue and Roeser Basin (Lindo Park)




## Public Meetings and Next Steps

Gathering input from area residents is an important part of the study process to ensure that potential mitigation alternatives will fit well within the communities they are intended to benefit. At two points during the study, public meetings will be held. The purpose of the initial public meetings is to present the results of the flood analysis to the community and obtain input on preliminary flood control alternative solutions. FCD and City of Phoenix staff are available to answer questions and obtain feedback. A comment form has been provided. Please use the form with this guide to provide feedback on the potential alternatives.

After the initial set of public meetings, the study team will refine and evaluate the preliminary alternatives. In the later stages of the study, a second set of public meetings will be held to provide a study update and obtain input on the recommended alternatives.

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# Laveen
# Area Drainage Master Study/Plan Update

May 2017

## Laveen Area Drainage Master Study

The Flood Control District of Maricopa County (FCD), in partnership with the City of Phoenix, has initiated a study to update the Laveen Area Drainage Master Plan for the South Phoenix/Laveen area using new mapping and new comprehensive flood model software. The updated study will also use data gathered from the heavy rains and flooding that occurred in August and September of 2014.

The study will include analysis of existing regional drainage improvements such as detention basins, channels, storm drains and culverts, much of which has been constructed based on recommendations from earlier versions of the regional drainage master plans. Previous construction efforts have focused mainly on the downstream portion of the overall recommended regional system to provide outfall for the future improvements nearer the foothills. The study will also recommend any needed additional regional drainage facilities extending further up into the watershed to address neighborhood flooding issues that became apparent during the 2014 storms.

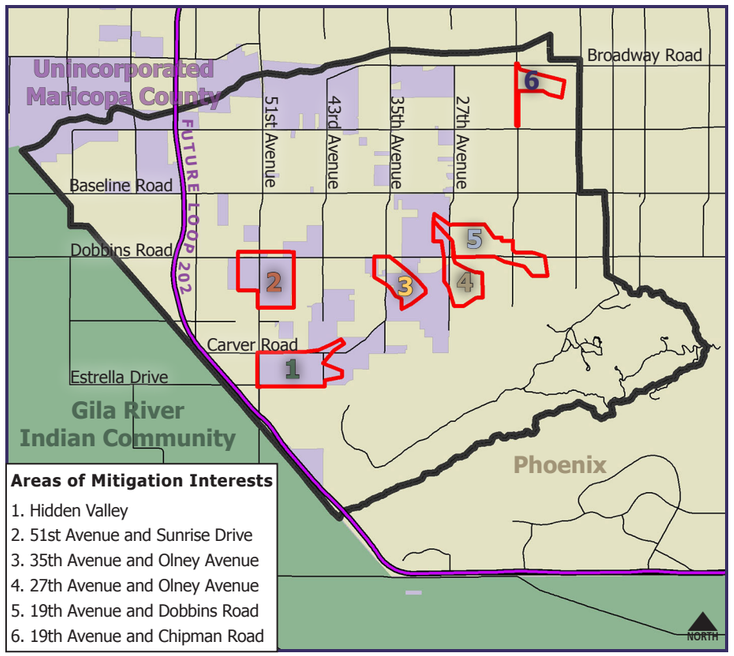
## Study Progress

A working version of the regional flood model has been completed that covers the entire study area. The new model includes information on current residential and other building and roadway improvements in this rapidly developing area.

The model also reflects all drainage improvements constructed in the study area to date, such as the recently completed regional detention basin at 27th and South Mountain Avenues. The existing drainage improvements include miles of storm drains, open channels, and six large stormwater basins. These structures collect, store and meter the water to downstream facilities that outfall to the Salt River.

## Areas of Mitigation Interest

Six problem areas prone to regional flood hazards, or Areas of Mitigation Interest (AoMI) were identified based on the model results and known past flooding. The study team developed two potential drainage mitigation alternatives for five of the AoMIs. One alternative has been developed for AoMI Area 6. The main goal of the study is to identify which of the potential alternatives would be the most "effective" to mitigate potential drainage hazards in each area. Effectiveness includes many criteria, such as: cost, community acceptance, and constructibility. The figures show the potential alternative concepts and how they would be incorporated into the existing infrastructure within each area. Drainage mitigation alternatives were developed for the 100-year storm event unless otherwise noted.




**Areas of Mitigation Interests**

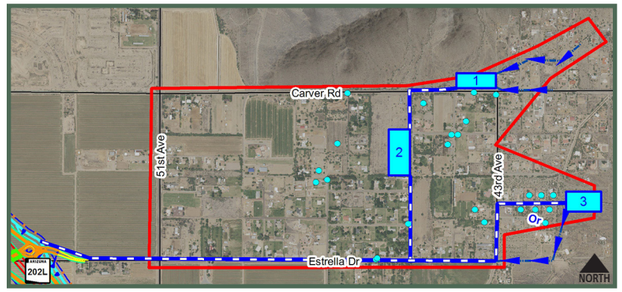
1. Hidden Valley
2. 51st Avenue and Sunrise Drive
3. 35th Avenue and Olney Avenue
4. 27th Avenue and Olney Avenue
5. 19th Avenue and Dobbins Road
6. 19th Avenue and Chipman Road

## 1. Hidden Valley

Most of the flooding problems in Hidden Valley are the result of two major washes that fan out, eventually meet, and flow together west of 43rd Avenue.

### ALTERNATIVE A

- Construct three basins with a channel upstream of Basin 1
- Connect Basin 1 to Basin 2 with a storm drain
- Drain Basins 2 and 3 by channel (or storm drain) along 43rd and 45th Avenues, along Estrella Drive to South Mountain Freeway/ Loop 202 drainage infrastructure

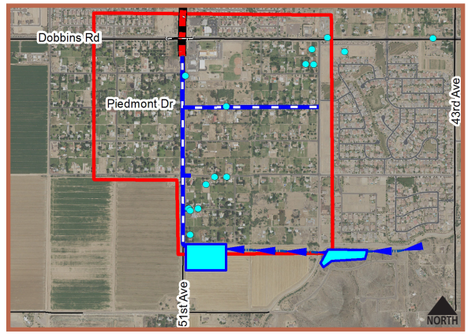



## 2. 51st Avenue and Sunrise Drive

Many of the flooding problems in the 51st Avenue and Sunrise Drive area are the result of stormwater flows draining off the north face of Carver Mountain that eventually pond in irrigated lots south of Dobbins Road and east of 51st Avenue. This off-site runoff combined with onsite rainfall creates extreme flooding hazards in this area.

### ALTERNATIVE A

- Extend existing storm drain in 51st Avenue south to Sunrise Drive
- Add a new basin at 51st Avenue and Sunrise Drive with collection channel/storm drain to existing basin in Carver Mountain Estates subdivision
- Extend existing diversion channel further east along canal and outlet to existing basin in Carver Mountain Estates Subdivision
- Add a storm drain along Piedmont from 51st Avenue to 47th Avenue
- Add laterals and inlets at minor streets along 51st to drain existing neighborhood

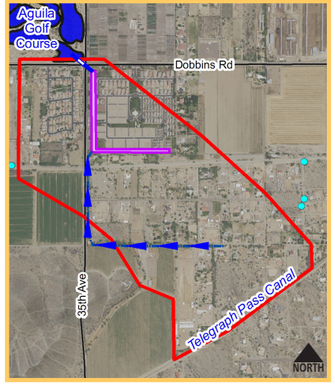



## 3. 35th Avenue and Olney Avenue

In this area, most of the flooding problems are the result of major washes that come together along Olney Avenue (between 35th Avenue and 31st Drive) causing local neighborhood flooding then flowing into the Dobbins Place subdivision drainage channel. Downstream roadway flooding problems are worsened at the intersection of Dobbins and 35th Avenue due to the lack of drainage infrastructure to carry flow into existing storage basins within the Aguila Golf Course.

### ALTERNATIVE A

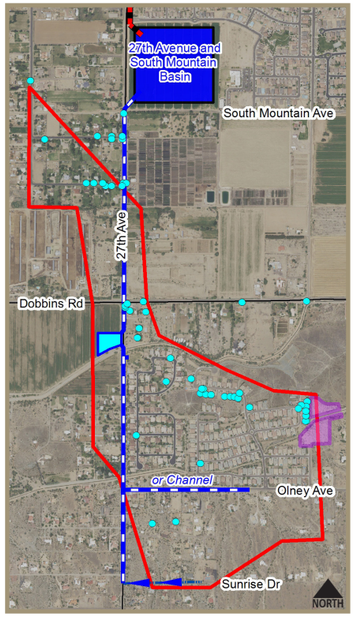
- Utilize the existing private channel within the Dobbins Place subdivision
- Construct an outfall in the channel to the Aguila Golf Course
- Construct a new channel (or storm drain) to carry stormwater into the existing channel in Dobbins Place subdivision
- Collect runoff from the east with a storm drain or channel along Olney Avenue






### ALTERNATIVE B

- This alterative is the same as Alternative A but with a 100-year design capacity in the new 27th Avenue storm drain from Sunrise Drive to the 27th Avenue and South Mountain Basin
- Construct a detention basin at the southwest corner of Dobbins Road and 27th Avenue




**Legend for AoMIs Maps 4 and 5**

- Drainage Complaints
- Phoenix HMA Proposed Basins
- Humane Society Channel
- Existing Basin

**Potential Alternatives**

- Basins
- Channel
- Storm Drain

**Existing Storm Drain**

- 0 - 12
- 13 - 24
- 25 - 36
- 37 - 60
- 61 - 84
- 85 - 114

Maps not to scale.

### ALTERNATIVE B

- Extend 7th Avenue storm drain to McNeill Street to capture flow in wash
- Add diversion channel south of the Humane Society to divert flows to new basin, west of the Humane Society on the south side of Dobbins Road
- Add outfall from Humane Society channel to the new basin with outflow storm drain to 27th and South Mountain Avenue Basin
- Construct diversion channel/basin adjacent to and along the southern side of the Western Canal to drain to the new storm drain in 19th Avenue